

REMARKS

The above amendment is made in response to the Office Action mailed March 25, 2004.

The specification was has been amended to include headings and correct a minor editorial problem.

Claims 1-4 and 6-8 have been amended to correct minor editorial problems.

Claims 1-8 are pending in the present application and stand rejected. The Examiner's reconsideration is respectfully requested in view of the following remarks.

Claims 1-3, 7 and 8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Smyth (U.S. Patent No. 5,465,321) (hereinafter "Smyth"). The rejection is respectfully traversed.

Claim 1 claims, *inter alia*, "said time series x_n being modeled as two-state first order Markov processes with *associated transition probabilities* $p(i|j)$." Claim 1 further claims that "p(i|j) is...the probability that $S_n = i$ given that $S_{n-1} = j$ " and that

$$S_n = \begin{cases} 0 & \text{if } x_n \leq T \\ 1 & \text{if } x_n > T \end{cases} .$$

The Office Action generally cites col. 15, line 54 to col. 16, line 12, describing an alternative embodiment of Smyth (as opposed to the distinguishable main embodiment described prior to col. 14, line 18). However, the above-recited portion of Smyth does not disclose the "associated transition probabilities p(i|j)," as claimed in claim 1.

Because the recited portion of Smyth does not disclose “ $S_n = \begin{cases} 0 & \text{if } x_n \leq T \\ 1 & \text{if } x_n > T \end{cases}$,” it

follows that it also does not disclose “computing said four transition probabilities the last N states S_n , where N is a predetermined number,” as claimed in claim 1.

The Office Action cites col. 4, lines 40-48 of Smyth as disclosing “two independent probabilities $p(1|1)$ and $p(1|0)$,” as claimed in claim 1. The above-recited portion of Smyth does not disclose “two independent probabilities $p(1|1)$ and $p(1|0)$,” as claimed in claim 1.” It thus follows that the Office Action does not disclose the steps of “computing the two-dimensional feature vectors $f_i = \{p(1|1), p(1|0)\}_i$ for the initial M windows of N scans”; “computing the two-dimensional feature vectors $f_f = \{p(1|1), p(1|0)_f\}$ for the final N number of scans”; “plotting a *scatter-diagram* of all 2D feature vectors $(f_i)_n$ and $(f_f)_n$, ($n = 1 \dots J$)”;

and “deriving from the scatter-diagram a pattern classifier by estimating the optimal linear discriminant *which separates the two foregoing sets of vectors*,” each as claimed in claim 1. Further, because the recited portion of Smyth does not disclose the step of “deriving from the scatter diagram a pattern classifier,” it follows that it does not disclose “applying said classifier to monitor the persistence of occurrences of said defined event in the operation of said device,” as claimed in claim 1.

The Office Action improperly addresses only select limitations of the claims. It is respectfully submitted that the Office Action must address *each and every* limitation of the claims.

Claims 7 and 8 are allowable for at least the reasons given for claim 1.

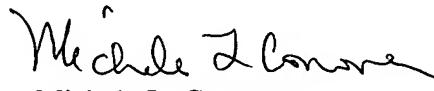
Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Smyth in view of Berezowitz et al. (U.S. Patent No. 6,453,009) (hereinafter “Berezowitz”). Claim

4 is allowable over the combination of Smyth and Berezowitz for at least the reasons given above. It is further submitted that the only way to combine Smyth and Berezowitz in the manner suggested by the Office Action requires the impermissible hindsight knowledge obtained from the present disclosure.

Accordingly, claims 1, 7 and 8 are believed to be patentably distinguishable over Smyth. Dependent claims 2 and 3 are believed to be allowable for at least the reasons given for claim 1. Claim 4 is believed to be non-obvious over the combination of Smyth and Berezowitz. Dependent claims 5 and 6 are believed to be allowable for at least the reasons given for claim 4. Withdrawal of the rejection of claims 1-8 is respectfully requested.

In view of the foregoing remarks, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable reconsideration is respectfully requested.

Respectfully submitted,



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